Background briefing document
Noncommunicable Diseases in sub-Saharan Africa and Rwanda

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The disease burden in sub-Saharan Africa

In sub-Saharan Africa, NCDs have been projected to overtake communicable, maternal, neonatal, and nutritional diseases combined as the leading cause of mortality by 2030.

The surge in NCD prevalence in sub-Saharan Africa over the past two decades is driven by increasing incidence of risk factors such as unhealthy diets, reduced physical activity, hypertension, obesity, diabetes, dyslipidaemia, and air pollution.

Success in fighting HIV, tuberculosis and other deadly infectious diseases, plus an expansion of essential services, have helped countries in sub-Saharan Africa achieve extraordinary gains in healthy life expectancy over the past two decades — 10 additional years, the largest improvement in the world. **But this was offset by the dramatic rise in hypertension, diabetes and other noncommunicable diseases and the lack of health services targeting these diseases**, show a 2022 WHO report on health care in Africa.

The report shows that noncommunicable diseases now account for half of hospital bed occupancy in Kenya and more than a third of deaths. The rates are similar across the rest of sub-Saharan Africa, and people in this region are being affected at younger ages than those in other parts of the world.

Now, NCDs are becoming the main cause of mortality in sub-Saharan Africa, and were responsible for 37% of deaths in 2019, rising from 24% in 2000. This is largely due to weaknesses in the implementation of critical control measures including prevention, diagnosis and care. In Ethiopia, for example, mortality caused by these conditions climbed to 43 percent of deaths in 2023 from 30 percent in 2015, and made a similar jump in the D.R.C.

In the African region, the number of people living with diabetes, for example, is expected to reach 47 million by 2045 up from 19 million in 2019. WHO estimates yearly premature deaths from all NCDs to increase to 3,8 million in 2030, or 51 % of premature mortality, in sub-Saharan Africa alone. For the entire region of the African Union, the total number of deaths due to NCDs & injuries and mental health conditions is expected to at least triple by 2063 to 16,6 million per year, 89% of all deaths.

The rising burden of noncommunicable diseases will exert pressure on treatment and care services. This rapid shift also means that awareness of NCDs remains low among the general population and many health professionals, and health systems are largely unprepared to manage the current NCD burden, especially given that health budgets are already tightly stretched. Our understanding of the NCD burden in sub-Saharan Africa is limited by the lack of established vital statistics systems and reliable population-level data for most countries in the region. This is common among many low- and middle-income countries.

Universal Health Coverage and NCDs in Rwanda – a regional success story

The right to health is reflected within Rwanda's constitution and UHC is the cornerstone of the Health Sector's Strategic Plan. The government has taken a strong lead in enactment of UHC whilst constructively engaging with partners, civil society and the community. The Ministry of Health have been working towards equity through ensuring high coverage health insurance within both formal and non-formal sectors of the population, steady decentralisation of the health system to ensure health service coverage in rural areas, and community engagement within governance processes.

In the last two decades Rwanda has improved the health and well-being of all its people. This was done through a combination of evidence-based and people-centred strategies and interventions:

Rwanda is improving access to health services by establishing "health posts" close to communities. This shortens the distances people need to travel to receive the care they need, as well as increasing access for specific specialized care. With support from administrative districts, communities and partners, the Ministry of Health has, since August 2021, established 1280 health posts that provide basic health services nationwide to underserved communities. The Ministry of Health has also now established 21 new health posts, known as second-generation health posts, with upgraded services such as maternity, laboratory, dental care, ophthalmology, and circumcision in various areas of the country.

Rwanda's experience with decentralising NCD care has been a key example in the region. It has been a leading country on implementation of the WHO PEN- Plus strategy to address severe NCDs (such as type 1 diabetes, sickle cell disease and rheumatic heart disease) at first level health facilities in rural and peri-urban areas.

Community-Based Health Insurance (CBHI) schemes give over 92% of the population access to quality healthcare services. Insurance has also reduced out-of-pocket expenditures (which are 4% as a share of total health expenditure) in particular for the poorest and most vulnerable people. The percentage of the population with some kind of health insurance increased from 43.3% in 2005 to 90.5% in 2020.

Membership in the CBHI scheme is accessible to working-age Rwandans in the informal sector with an annual membership fee per family member, which varies based on an income categorization of households, and a 10 % co-payment fee for all services at health care facilities. However, this 10% co-payment is still inaccessible for low-income households, especially for costly NCD treatments. Reports from Rwanda's Social Security Board states that some members of community-based health insurers (CBHIs) are low-income earners who cannot afford to pay even 1% of the cost of their medication.

Membership fees are paid annually and households are divided into categories according to their income:

- Category I pays 3,000Frw (US$2.13) per person and this category is supported by the Government and other donors, which covers those who are unable to pay
- Category II & III pay 3,000Frw (US$2.13) per person
- Category IV pays 7,000Frw (US$4.98) per person

In January 2025, the Rwandan government revised health service tariffs, significantly reducing costs for CBHI beneficiaries. This is the first review of tariffs since 2017. To ensure fairness and sustainability, the government will now review health service tariffs every two years.

- The cost of advanced medical procedures has seen substantial reductions. For example, a CT brain scan now costs Rwf 16,283, down from Rwf 45,000. CBHI beneficiaries will pay only Rwf 1,628 as a co-payment, compared to the previous Rwf 4,500.
- By June 2025, 14 new medical services, including cancer treatment, heart care, and minimally invasive surgery, will also be fully integrated into CBHI.

The government also announced in Nov 2024 that all refugees would be included in the programme by 2025, further extending UHC coverage.

Rwanda's health posts: bringing care to the communities

With 83% of Rwandans living in rural areas, travel to a health facility has often been challenging for many families and communities. In 2010, the average walking time to the nearest health facility was 95 minutes. Through health posts, which provide basic health services nationwide to underserved communities (*see point 1 above*), by 2020 this was halved to 47 minutes, and the Government aims to further reduce walking time to under 25 minutes by 2024.

The Government is seeking to establish a public-private-partnership approach in which some health posts are managed by public health centres, some by non-governmental organizations and others by private sector. This hybrid and harmonized approach could improve both the effectiveness and sustainability of the health post programme. They also serve as an interface between health centres and community health workers. The community health workers provide selected health services on a voluntary basis in each of the 14,837 villages and in health centres.

Currently, nearly 50% of the country's health posts are managed by private operators with the rest under health centers. Investments made in health posts are paying off. The plan is to continue scaling up the programme throughout the country. Minister of Health, Dr. Sabin Nsanzimana, addressed Senate in January 2025, declaring that over the next five years, 100 new health posts will be established and 420 existing ones will be rehabilitated. The Minister also recognised that about 20% of health posts experience staffing shortages, a problem which is being addressed by the 4x4 Reform, a strategy introduced in 2023 to quadruple the number of healthcare workers within the next four years.

NCD response in Rwanda

Rwanda's progress has been guided by its National Strategy for the Prevention and Control of NCDs 2020-2025, the development of which was inputted by the Rwanda NCD Alliance and people living with NCDs. Rwanda NCDA advocated towards this Strategy as part of their work supported by NCD Alliance's NCDs and UHC Advocacy Institute Accelerator Programme. The National Strategy and Costed Plan was launched at the Rwanda National NCDs Conference (organised by the alliance) in November 2021, together with the National Advocacy Agenda of People Living with NCDs supported through NCDA's Our Views Our Voices initiative. It lists the Rwanda NCDA as an

implementing partner. The national Strategy aims to advance health system strengthening for NCDs and UHC, and includes objectives covering four pillars: prevention, health system strengthening, surveillance and increased multisectoral coordination. This fourth pillar will be rolled out through a National Multi-Stakeholder NCDs Coordination Committee, which the Rwanda NCD Alliance has been advocating for.

The Rwanda Biomedical Centre (RBC) is the Ministry of Health's (MoH) central health implementation agency, and oversees all NCD activities in the country. Its NCDs Division was established in 2011. RBC works in close collaboration with health facilities, public institutions, and other partners to reduce the burden of NCDs in Rwanda. The division's priority activities include:

- Increasing awareness in the community about prevention and early detection of NCDs
- Integrating cervical cancer screening and early detection of breast cancer in primary health care facilities
- Establishment of specialized facilities for management of NCDs, including cancer, cardiovascular disease, dialysis, renal transplantation and rehabilitation centres.
- Upgrading cancer diagnostic capacity in the country, with a focus on teaching hospitals
- Decentralization of the management of NCDs from the central level to district hospitals and health centres
- Improving facility management and rehabilitation of injuries and rehabilitative services for persons with disabilities
- Establishing disease registries: National Cancer Registry, Injury Registry, Diabetes Registry, Rheumatic Heart Diseases Registry
- Promotion of research and development related to NCDs
- Developing innovative approaches, including precision medicine for cancer management.

The country also organises various NCD awareness raising activities in schools and communities. For example, in May 2016, the City of Kigali, Rwanda's capital, launched a 'Car Free Day', aimed at encouraging people to engage in regular physical activities to prevent NCDs. It started as a once-a-month idea, and now takes place twice a month in Kigali and has been extended to other districts. In addition to promoting physical activity, it also serves as a platform for NCD awareness and screening. The Rwanda NCD Alliance is actively involved.

Since the initiative started in 2016, thousands of people have been screened for NCDs, inc. hypertension and obesity. A recent environmental study showed that Car Free Day, held 26 times a year in Kigali, has helped reduce air pollution by 15 per cent in five years, confirming that the initiative significantly reduced greenhouse emissions and car emissions.

The disease burden in Rwanda

Rwanda's population stands at 14.4 million people, as of January 2025. From 2000 and 2018, average life expectancy increased from 47 years to 69 years. This indicates both health gains and increased risk of NCDs.

The burden of NCDs in Rwanda has increased tremendously over the years. In 2018, the Institute for Health Metrics and Evaluation noted that NCDs account for 35 percent of DALYs in 2016, up from 16 percent in 1990.

A key hurdle for medical providers in Rwanda is identifying patients in time to treat them — national health data indicates that only 12% of patients living with NCDs were diagnosed and receiving treatment in early 2022, and existing screening data was stored primarily on paper, making it difficult to analyze and use.

The same data gap exists for mortality. WHO estimates from 2016 show that NCDs accounted for 44% of total annual mortality in Rwanda. However, according to the Rwanda Biomedical Centre, NCDs (including injuries) account for 59% of all deaths in the country.

This discrepancy may be due to the fact that there are still gaps in mortality data, namely challenges in recording deaths occurring outside of health facilities, which are usually neither notified nor registered. To address this, Rwanda initiated the registration and reporting of probable cause of death (CoD) when deaths occur outside of medical facilities. In the absence of trained physicians able to complete a CoD medical certificate, this is instead done through verbal autopsies (VA).

VA data in pilot districts shows that NCDs are the most common CoD, resulting in more deaths than all other CoDs combined. VA data also shows higher rates of deaths related to NCDs when compared to data provided by health facilities. Additional complicating factors included limited awareness in the population about NCDs and associated risk factors; an inadequate referral system for diabetes and hypertension emergencies; ineffective community screening and follow-up; and limited equipment, staff, and infrastructure. Late or non-diagnosis also leads to complications and more serious disease.

For instance, research from 2018 showed that only an estimated 22% of hypertensive Rwandans were diagnosed, and 40% of adults presented for the first time with heart failure class III to IV (late-stage, requiring surgical intervention).

Similarly, and despite a sharp rise (167.5%) in diabetes cases between 2010 and 2017 among adults in Rwanda, most people living with diabetes in Rwanda were not diagnosed or being treated. The current coverage rate as of 2020 was around 4% with the aim is to increase this to 50% by 2025.

Like other NCDs, the cancer burden in Rwanda is increasing. Data covering the 2007-2018 period from a newly established cancer registry in Rwanda strongly suggests that the majority of cancer cases in the country are never diagnosed or treated. For example, WHO's Global Cancer Observatory estimates breast cancer cases for Rwanda as 1,131 new cases annually, whereas annual cases recorded in the national registry are just 217. This suggests that only 20 percent of new cases are being diagnosed.

However recent advances in Rwanda's health system are drastically and rapidly improving these statistics as well as national health data. For instance, since July 2022, health officials have been conducting hypertension and diabetes screenings via a new DHIS2 NCD tracker tool, which was created by HISP Rwanda in collaboration with the RBC. The tool has proven very successful, enabling a huge increase in NCD screenings for the target population, from a base rate of only 30% to more than 91% in the first two years of use.

The tool integrates and unifies data from multiple sources, and streamlines follow-up care and referrals for any positive cases, ultimately resulting in wider diagnosis and treatment of NCDs in Rwanda. Various public-private partnerships are also making significant contributions.

NCD risk factors in Rwanda

The Rwanda Ministry of Health Non-Communicable Diseases Risk Factors Report from 2012 shows that the main risk factors are the harmful use of alcohol and an unhealthy diet, followed by tobacco use, while the IHME also includes air pollution. Despite high taxation on commercially produced alcoholic drinks, the population's large-scale consumption of locally brewed alcohol poses several challenges for alcohol control in Rwanda. There is a need to increase awareness in the general population on the harmful use of alcohol, as there is currently no significant media outreach focused on raising awareness of alcohol abuse.

Currently, the Government of Rwanda, in collaboration with several multisector stakeholders, is implementing and enforcing the WHO Framework Convention on Tobacco Control (FCTC). Physical inactivity and obesity were not presented as major risk factors in Rwanda in the report. However, cases of obesity are increasing. The prevalence of overweight or obesity in women of reproductive age has doubled within 10 years and is of public health concern, especially in urban areas.

The economics of NCDs in Rwanda

Despite the rising burden of NCDs, budget allocations remain very low. As highlighted in the National Strategy document:

- In fiscal year (FY) 2015-16, approximately 0.8 to 2 percent of the health budget was allocated to NCDs, compared with 57 percent for HIV/AIDS and other blood-borne diseases [35]. Budget allocation to NCDs increased in FY2016-17, but this increase was very limited vis-à-vis the disease burden.
- Less than 1.7% of the budget for disease prevention and control programmes was spent on NCD control and prevention, according to the Health Resource Tracking Tool (HRTT) from July 2020.
- 19.3% of households reported a financial shock over a period of 12 months, due to serious illness or accident among household members. Knowing that NCDs are the most common cause of morbidity, in addition to the high cost of treatment and care, it can be assumed that a high percentage of these household shocks can be attributed to NCDs.

There are currently no reliable socioeconomic impact studies on NCDs in Rwanda. Total expenditure on NCDs is not captured in detail within the HRTT, as there is no itemised expenditure by NCD cluster. This makes it difficult to understand which of the NCDs are being prioritised and which are not.